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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/073,317	02/13/2002	Hitoshi Yoshino	219453US2	5320
22850	7590	12/02/2005	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			ABELSON, RONALD B	
			ART UNIT	PAPER NUMBER
			2666	

DATE MAILED: 12/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/073,317	YOSHINO ET AL.	
	Examiner	Art Unit	
	Ronald Abelson	2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/1/04, 12/11/02, 8/26/02, 4/25/02, 2/13/02
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 5-7 and 13 is/are rejected.
- 7) ☒ Claim(s) 2-4, 8-12, 14 and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12/1/04, 12/11/02, 8/26/02, 4/25/02</u> | 6) <input type="checkbox"/> Other: _____ |

Claim Objections

1. Claim 7 is objected to because of the following informalities: On line 3 "bases" should be changed to "basis". Appropriate correction is required.

Claim 8 objected to because lines 6-8 state, "said mobile station directing a radio wave beam to a direction from which another radio wave beam comes". Furthermore, the specification on pg. 6 13-15 states, "the mobile station has non-directional antenna instead of a directional antenna" and on pg. 18 lines 18-19 states, "The mobile station includes an array antenna and directs the beam to the direction". The applicant should clarify if the mobile station includes both a non-directional antenna and array antenna. Appropriate correction is required.

Claim 9 objected to because lines 7-9 state, "said mobile station directing a radio wave beam to a direction from which a second radio wave beam comes". Furthermore, the specification on pg. 6 13-15 states, "the mobile station has non-directional antenna instead of a directional antenna" and on pg. 18 lines 18-19 states, "The mobile station includes an array antenna and

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directs the beam to the direction". The applicant should clarify if the mobile station includes both a non-directional antenna and array antenna. Appropriate correction is required.

Claim 14 objected to because lines 10-11 state, "directing a radio wave beam to a direction from which another radio wave beam comes". Furthermore, the specification on pg. 6 13-15 states, "the mobile station has non-directional antenna instead of a directional antenna" and on pg. 18 lines 18-19 states, "The mobile station includes an array antenna and directs the beam to the direction". The applicant should clarify if the mobile station includes both a non-directional antenna and array antenna. Appropriate correction is required.

Claim 15 objected to because lines 9-10 state, "directing a radio wave beam to a direction from which a second radio wave beam comes". Furthermore, the specification on pg. 6 13-15 states, "the mobile station has non-directional antenna instead of a directional antenna" and on pg. 18 lines 18-19 states, "The mobile station includes an array antenna and directs the beam to the direction". The applicant should clarify if the mobile station includes both a non-directional antenna and array antenna. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 5, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawabata (EP 0963129).

Regarding claims 1 and 13, Kawabata teaches a communication control method used in a cellular mobile communication system (fig. 1, radio communication system, [0030]) in which each base station can radiate radio wave beams to a plurality of directions (directional antenna, covers a zone, [0030]) and each base station communicates with the mobile by using the same frequency by radiating radio wave beams to the mobile stations (base stations each using the same frequency, [0030]).

Kawabata teaches controlling first timing at which a base station radiates a first radio wave beam such that said first timing is different from second timing at which another base

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station radiates a second radio wave beam which may cause interference with said first radio wave beam (fig. 5, 6A-E, base station b8 selects V3 slot for broadcasting channel receiving less interference, [0045]).

Regarding claim 5, when a radio wave beam is radiated by a base station covers a plurality of mobile stations, controlling said base station such that timing at which said radio wave beam is radiated is different for each mobile station (slots allocated in order of being closer to the timing T2 to T6 to terminal stations located in any of the antenna directions a2 to a6, [0039]).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a),

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the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawabata as applied to claim 1 above, and further in view of Jokinen (US 6,266,330).

Regarding claim 6, in addition to the limitations previously addressed, Kawabata teaches controlling timing of a radio wave beam at which a base station radiates such that said radio wave beam is radiated for a mobile station in a timeslot at predetermined intervals (fig. 3A, slot is allocated when terminal located in direction a1, [0036]).

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Regarding claim 6, Kawabata is silent on radiating for a mobile station in a plurality of timeslots at predetermined intervals.

Jokinen teaches radiating/assigning for a single station a plurality of timeslots at predetermined intervals (col. 3 lines 48-53).

Regarding claim 7, Kawabata is silent on the number of said timeslots is determined on the basis of the communication state in said base station.

Jokinen teaches the number of said timeslots is determined on the basis of the communication state in said base station (multiple time slots to achieve higher data rate, col. 3 lines 48-53). The examiner corresponds the applicant's communication state with the reference's data rate.

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of Kawabata by having the base stations radiate for a mobile station in a plurality of timeslots at predetermined intervals. This modification can be performed in software according to the teachings of Jokinen. The suggestion for the modification is to allow for higher data rate transmission (Jokinen: col. 3 lines 48-53). This would

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enable the system to operate in a high data rate environment.

Allowable Subject Matter

7. Claims 2-4, 7, and 10-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

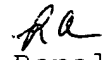
Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald Abelson whose telephone number is (571) 272-3165. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Ronald Abelson
Examiner
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